

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 34. (canceled)

35. (new) A method of controlling micro-particles in a micro-array analyzing system, comprising the steps of:

arranging and controlling a plurality of magnetic members to apply magnetic fields to a plurality of magnetic micro-particles contained in a vessel, in response to respective signals received by each of the magnetic members independently;

introducing a solution flow into the vessel;

setting on each of the plurality of magnetic members are a corresponding one of the independently-received signals in order of location from downstream of the solution flow; and

setting off each of the plurality of magnetic members by a corresponding one of the independently-received signals in order of location from downstream of the solution flow, after said step of setting on each of the plurality of magnetic members.

36. (new) The method according to claim 35, further comprising the step of immobilizing a probe to a surface of at least one of the magnetic micro-particles.

37. (new) The method according to claim 35, further comprising the steps of:
providing a plurality of non-magnetic micro-particles in the vessel;
arranging the magnetic micro-particles and non-magnetic micro-particles in a sequence within the vessel;
immobilizing a probe on a surface of at least one of the non-magnetic micro-particles; and
sandwiching said at least one of the non-magnetic micro-particles having the probe immobilized thereon between first and second ones of the magnetic micro-particles.

38. (new) The method according to claim 35, further comprising the step of immobilizing a plurality of kinds of probes to the plurality of micro-particles such that each probe is immobilized on a surface of one of the micro-particles with one-to-one correspondence, respectively.

39. (new) The method according to claim 35, further comprising the step of providing the plurality of magnetic micro-particles in a single line within the vessel, wherein each of the plurality of magnetic micro-particles has a diameter that is larger than one-half the inner diameter of the vessel.

40. (new) The method according to claim 35, further comprising the steps of:
providing a plurality of non-magnetic micro-particles in the vessel; and
arranging the magnetic micro-particles and non-magnetic micro-particles in a sequence within the vessel.

41. (new) The method according to claim 40, further comprising the steps of movably providing the magnetic members outside of the vessel.

42. (new) The method according to claim 40, wherein the magnetic members are electromagnets provided outside of the vessel, and the method further comprises the steps of:

varying the magnetic fields generated by the electromagnets; and
moving the magnetic micro-particles by controlling capturing to the electromagnets dissociation from the electromagnets of the magnetic micro-particles in accordance with the variation of the magnetic fields generated by the electromagnets.

43. (new) The method according to claim 40, further comprising the steps of:
providing the vessel with branched channels, wherein the magnetic micro-particles and the non-magnetic micro-particles are each included in one of the branched channels; and

on/off setting the plurality of magnetic members to take out at least one of the magnetic micro-particles or non-magnetic micro-particles from an opening of a different one of the branched channels and said one of the branched channels.

44. (new) The method according to claim 40, further comprising the step of transporting particular molecules in a sample by collecting one of the magnetic micro-particles or non-magnetic micro-particles from an opening end of the vessel to

which the collected particle is moved by on/off setting of the plurality of magnetic members.

45. (new) The method according to claim 35 further comprising the step of collecting one of the magnetic micro-particles moved by the on/off setting of the plurality of magnetic members.

46. (new) The method according to claim 35, further comprising the step of collecting one-by-one the magnetic micro-particles from an opening end of the vessel by the on/off setting of the plurality of magnetic members in response to corresponding ones of the independently-received signals.

47. (new) The method according to claim 35, wherein the solution flow introducing step introduces the solution into a vessel so as to convey the magnetic micro-particles one-by-one from the opening end of the vessel as the on/off setting of the plurality of magnetic members releases the magnetic particle closest to the opening end of the vessel.

48. (new) The method according to claim 35, further comprising the step of providing a washing solution vessel holding a washing solution;

wherein the solution flow introducing step is performed to introduce the washing solution into the vessel before the plurality of magnetic members are set on and then off in order of location from downstream of the solution.

49. (new) The method according to claim 35, further comprising the step of collecting an individual one of the magnetic micro-particles from an opening end of the vessel by the on/off setting of the plurality of magnetic vessels in response to corresponding ones of the independently-received signals.

50. (new) The method according to claim 35, further comprising the steps of:
setting on the magnetic member that applies the magnetic field to control the position of the magnetic micro-particles that is most downstream of the plurality of magnetic micro-particles and closest to the opening end of the vessel; and
setting off the magnetic member that applies the magnetic field to control the position of said most-downstream magnetic micro-particle, while retaining switched on the magnetic member that applies the magnetic field to control the position of the magnetic micro-particle that is next in line to said most-downstream magnetic micro-particle, whereby a single one of the magnetic micro-particles is collected individually from the opening end of the vessel.

51. (new) The method according to claim 40, further comprising the step of collecting the magnetic micro-particles and non-magnetic micro-particles one-by-one from an opening end of the vessel by the on/off setting of the plurality of magnetic members in response to corresponding ones of the independently-received signals.

52. (new) The method according to claim 40, wherein the solution flow introducing step introduces the solution into the vessel so as to convey the magnetic micro-particles and non-magnetic micro-particles one-by-one from the opening end

of the vessel as the on/off setting of the plurality of magnetic members releases the magnetic particle closest to the opening end of the vessel.

53. (new) The method according to claim 40, further comprising the step of providing a washing solution vessel holding a washing solution;

wherein the solution flow introducing step introduces the washing solution into the vessel before the plurality of magnetic members are set on and then off in order of location from downstream of the solution flow.

54. (new) The method according to claim 40, further comprising the step of collecting an individual one of the magnetic and non-magnetic micro-particles from an opening end of the vessel by the on/off setting of the plurality of magnetic members in response to corresponding ones of the independently-received signals.

55. (new) The method according to claim 40, further comprising the step of providing the plurality of magnetic micro-particles and non-magnetic micro-particles in a single line within the vessel, wherein each of the plurality of magnetic micro-particles and non-magnetic micro-particles has a diameter that is larger than one-half the inner diameter of the vessel.

56. (new) The method according to claim 40, further comprising the steps of:
setting on the magnetic member that applies the magnetic field to control the position of the magnetic micro-particle that is most downstream of the plurality of magnetic micro-particles and closest to an opening end of the vessel;

then switching off the magnetic member that applies the magnetic field to control the position of said most-downstream magnetic micro-particle, while retaining set on the magnetic member that applies the magnetic field to control the position of said next-most downstream magnetic micro-particle; and

collecting individually the magnetic and non-magnetic micro-particles one-by-one from the opening end of the vessel by the on/off setting.